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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,564	01/16/2002	Andreas Manz	550-308	1784

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EXAMINER
THERKORN, ERNEST G

ART UNIT	PAPER NUMBER
1723	18

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

9

Office Action Summary

Application No.	Applicant(s)
10/046,564	MANZ
Examiner	**Art Unit**
THERKORN	1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on April 3, 2003; April 14, 2003; and May 19, 2003

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above, claim(s) 21 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-20 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 8, 11, 13
4) ☒ Interview Summary (PTO-413) Paper No(s). 14
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1, line 5's "thought" renders the claim indefinite.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5, and 10-14 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Miyazaki (E.P. 568,024). The claims are considered to read on Miyazaki (E.P. 568,024). However, if a difference exists between the claims and Miyazaki (E.P. 568,024), it would reside in optimizing the elements of Miyazaki (E.P. 568,024). It would have been obvious to optimize the elements of Miyazaki (E.P. 568,024) to enhance separation.

Claims 2, 7-9, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeung (U.S. Patent No. 6,387,234) in view of Miyazaki (E.P. 568,024). At best, the claims differ from Yeung (U.S. Patent No. 6,387,234) in reciting the particular micropump. Miyazaki (E.P. 568,024) (column 1, line 53-column 2, line 7) discloses a micropump that gasifies the liquid is very compact, has no dead space, and does not pulsate the flow. It would have been obvious to use a micropump that gasifies the liquid in Yeung (U.S. Patent No. 6,387,234) because Miyazaki (E.P. 568,024) (column 1, line 53-column 2, line 7) discloses a micropump that gasifies the liquid is very compact, has no dead space, and does not pulsate the flow.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki (E.P. 568,024) in view of Zare (U.S. Patent No. 6,136,187). At best, the claims differ from Miyazaki (E.P. 568,024) in reciting use of a gas flow unit. Zare (U.S. Patent No. 6,136,187) (column 4, lines 52-58) discloses use of a reduction in gas pressure aids evaporation. It would have been obvious to reduce gas pressure in Miyazaki (E.P. 568,024) because Zare (U.S. Patent No. 6,136,187) (column 4, lines 52-58) discloses use of a reduction in gas pressure aids evaporation.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki (E.P. 568,024) in view of either Sutton (U.S. Patent No. 6,103,112) or Overton (U.S. Patent No. 6,068,684). At best, the claim differs from Miyazaki (E.P. 568,024) in reciting use of a cooler. Sutton (U.S. Patent No. 6,103,112) (column 13, lines 36-40) discloses that use of a Peltier heater/cooler allows reaching and maintaining temperature. Overton (U.S. Patent No. 6,068,684)

(column 8, lines 10-18) discloses that use of a Peltier cooler allows temperature programming. It would have been obvious to use a cooler in Miyazaki (E.P. 568,024) either because Sutton (U.S. Patent No. 6,103,112) (column 13, lines 36-40) discloses that use of a Peltier heater/cooler allows reaching and maintaining temperature or because Overton (U.S. Patent No. 6,068,684) (column 8, lines 10-18) discloses that use of a Peltier cooler allows temperature programming.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeung (U.S. Patent No. 6,387,234) in view of Miyazaki (E.P. 568,024) as applied to claims 2, 7-9, and 17-19 above, and further in view of Henderson (U.S. Patent No. 6,258,263). At best, the claims differ from Yeung (U.S. Patent No. 6,387,234) in view of Miyazaki (E.P. 568,024) in reciting branching. Henderson (U.S. Patent No. 6,258,263) (column 6, lines 53-60 and column 9, lines 25-32) discloses branching allows simultaneous multiple analysis. It would have been obvious to use branching in Yeung (U.S. Patent No. 6,387,234) in view of Miyazaki (E.P. 568,024) because Henderson (U.S. Patent No. 6,258,263) (column 6, lines 53-60 and column 9, lines 25-32) discloses branching allows simultaneous multiple analysis.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yeung (U.S. Patent No. 6,387,234) in view of Miyazaki (E.P. 568,024) as applied to claims 2, 7-9, and 17-19 above, and further in view of Hatch (U.S. Patent No. 6,238,565). At best, the claim differs from Yeung (U.S. Patent No. 6,387,234) in view of Miyazaki (E.P. 568,024) in reciting use of a monolith. Hatch (U.S. Patent No. 6,238,565) (column 4, lines 24-26 and 62-66) discloses that with its ease of manufacturing and lack of bead shifting monoliths provide a surprising advantage

over existing technology and may fill a channel in a plate. It would have been obvious to use a monolith in Yeung (U.S. Patent No. 6,387,234) in view of Miyazaki (E.P. 568,024) because Hatch (U.S. Patent No. 6,238,565) (column 4, lines 24-26 and 62-66) discloses that with its ease of manufacturing and lack of bead shifting monoliths provide a surprising advantage over existing technology and may fill a channel in a plate.

Claims 2, 7-9, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson (U.S. Patent No. 6,258,263) in view of Miyazaki (E.P. 568,024). At best, the claims differ from Henderson (U.S. Patent No. 6,258,263) in reciting the particular micropump. Miyazaki (E.P. 568,024) (column 1, line 53-column 2, line 7) discloses a micropump that gasifies the liquid is very compact, has no dead space, and does not pulsate the flow. It would have been obvious to use a micropump that gasifies the liquid in Henderson (U.S. Patent No. 6,258,263) because Miyazaki (E.P. 568,024) (column 1, line 53-column 2, line 7) discloses a micropump that gasifies the liquid is very compact, has no dead space, and does not pulsate the flow.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson (U.S. Patent No. 6,258,263) in view of Miyazaki (E.P. 568,024) as applied to claims 2, 7-9, and 15-19 above, and further in view of either Sutton (U.S. Patent No. 6,103,112) or Overton (U.S. Patent No. 6,068,684). At best, the claim differs from Henderson (U.S. Patent No. 6,258,263) in view of Miyazaki (E.P. 568,024) in reciting use of a cooler. Sutton (U.S. Patent No. 6,103,112) (column 13, lines 36-40) discloses that use of a Peltier heater/cooler allows reaching and maintaining temperature. Overton (U.S. Patent No. 6,068,684) (column 8, lines 10-18) discloses

that use of a Peltier cooler allows temperature programming. It would have been obvious to use a cooler in Henderson (U.S. Patent No. 6,258,263) in view of Miyazaki (E.P. 568,024) either because Sutton (U.S. Patent No. 6,103,112) (column 13, lines 36-40) discloses that use of a Peltier heater/cooler allows reaching and maintaining temperature or because Overton (U.S. Patent No. 6,068,684) (column 8, lines 10-18) discloses that use of a Peltier cooler allows temperature programming.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson (U.S. Patent No. 6,258,263) in view of Miyazaki (E.P. 568,024) as applied to claims 2, 7-9, and 15-19 above, and further in view of Hatch (U.S. Patent No. 6,238,565). At best, the claim differs from Henderson (U.S. Patent No. 6,258,263) in view of Miyazaki (E.P. 568,024) in reciting use of a monolith. Hatch (U.S. Patent No. 6,238,565) (column 4, lines 24-26 and 62-66) discloses that with its ease of manufacturing and lack of bead shifting monoliths provide a surprising advantage over existing technology and may fill a channel in a plate. It would have been obvious to use a monolith in Henderson (U.S. Patent No. 6,258,263) in view of Miyazaki (E.P. 568,024) because Hatch (U.S. Patent No. 6,238,565) (column 4, lines 24-26 and 62-66) discloses that with its ease of manufacturing and lack of bead shifting monoliths provide a surprising advantage over existing technology and may fill a channel in a plate.

The restriction requirement between Groups I and II have been withdrawn.

The remarks urge the restriction requirement between the method and apparatus is improper. However, the combined groups of inventions I and II and group III are related as

process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed could be used in another and materially different process. For example, the apparatus could be used as a chemical reactor or biochemical reactor in a chemical or biochemical reaction process. As such, the restriction requirement between the method and apparatus claims has been reconsidered, deemed proper, and made final.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (703) 308-0362.

Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT/12
June 12, 2003